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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,226	01/22/2002	Won-Kyu Lee	6192.0278.AA	7988

7590

01/25/2005

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EXAMINER
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SHENG, TOM V

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/051,226

Applicant(s)

LEE ET AL.

Examiner

Tom V Sheng

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1, 6 and 12, the disclosure, when filed, does not fairly contain information regarding to the claimed features, "to substantially minimize a **blocking effect**", of independent claim 1, line 4, independent claim 6, last line, and independent claim 12, last line. The disclosure, specifically page 2, lines 2-3, discloses "the block driving LCD employing the line inversion approach suffers from a block defect". The phrase "**blocking effect**" cannot be found anywhere in the original disclosure.

Accordingly, the original disclosure does not fairly convey to one of ordinary skill in the art that the inventor(s) had in their possession the above underlined features presently recited in claims 1, 6 and 12. Claims 2-5, 7-11 and 13-15 are dependent on claims 1, 6 and 12, respectively.

The above rejection can be overcome by replacing "blocking effect" with "block defect". With the use of "block defect", however, a rejection under 35 U.S.C. 112, first paragraph based on missing essential or critical subject matter in claim arises. To clarify, the applicant clearly discloses that the extension part creates a parasitic capacitance and is preferably identical to a parasitic capacitance between one data line and the pixel electrode. Specifically, when the area of the extension part is equal to an area of the left data line (i.e. the overlap between left data line and the pixel electrode shown in fig. 4), a block defect does not occur. Merely having an extension part overlapping a portion of a pixel electrode would not "substantially minimize a block defect" without the relationship between the area of the extension part and the area of overlap between the left data line and the pixel electrode, thus making the claim non-enabling. See page 6, line 22 through page 7, line 9 and page 12, lines 9-11.

Due to the rejection under 35 USC 112 above, the following art rejections are based as best understood by the examiner.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Song et al. (US Patent 6313889 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As for claim 1, Song teaches a thin film transistor liquid crystal display (figure 18) of a line inversion type for block-driving data lines, comprising:

a data line comprising an extension part overlapping a portion of a pixel electrode (a connection portion 21 as a branch of a data line D extends to and being overlapped with a pixel electrode 10; column 15, lines 36-50) to substantially minimize a blocking effect (figure 19C, a disconnection at point a is repaired by routing through another path by shorting and cutting at other places with a specific short at point c between the pixel electrode and the connection portion; column 17, lines 40 to column 18, line 12),

wherein the pixel electrode is arranged at a boundary pixel (Song inherently teaches this structure on every pixel that corresponds to the case of one data line per driving-block).

As for claim 2, Song's pixels read on claimed boundary pixels between an  $(IN)^{th}$  data line and an  $(IN+1)^{th}$  data line where N is 1.

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As for claim 3, the connect portion 21 inherently has a width extending toward the pixel electrode.

As for claim 12, Song's branch of data line D over pixel electrode reads on claimed "at least one data line arranged over a pixel electrode".

As for claim 13, it is inherent that the pixel electrodes be made of a transparent conductive material for a transmissive display.

As for claim 14, it is inherent that the pixel electrodes be made of a reflective conductive material for a reflective display.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V Sheng whose telephone number is (703) 305-6708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Sheng  
January 18, 2005

  
JIMMY H. NGUYEN  
PRIMARY EXAMINER